



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0755; Directorate Identifier 2014-NM-080-AD; Amendment 39-18414; AD 2016-04-20]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, Model 757 airplanes, Model 767 airplanes, and Model 777 airplanes. This AD results from fuel system reviews conducted by the manufacturer. This AD requires an inspection to determine if certain motor-operated valve (MOV) actuators for the fuel valves are installed, and replacement of any affected actuators. Previous ADs addressed this Special Federal Aviation Regulation No. 88 (SFAR 88) issue for the majority of the airplanes delivered with these actuators. Since those ADs did not cover all of the airplanes, and for some airplanes delivered with improved actuators, there was no restriction on installation of replacement actuators with the unsafe condition, this additional rulemaking action is required. As with the related ADs, we are issuing this AD to prevent electrical energy from lightning, hot shorts, or fault current from entering the fuel tank through the fuel valve actuator shaft, which could result in fuel tank explosions and consequent loss of the airplane.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425 227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0755; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Rebel Nichols, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6509; fax: 425-917-6590; email: rebel.nichols@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, Model 757 airplanes, Model 767 airplanes, and Model 777 airplanes. The NPRM published in the Federal Register on November 7, 2014 (79 FR 66343) (“the NPRM”). The NPRM results from fuel system reviews conducted by

the manufacturer. The NPRM proposed to require an inspection to determine if certain actuators for the fuel valves are installed, and replacement of any affected actuators. Previous ADs addressed this SFAR 88 (66 FR 23086, May 7, 2001) issue for the majority of the airplanes delivered with these actuators. Since those ADs did not cover all of the airplanes, and for some airplanes delivered with improved actuators, there was no restriction on installation of replacement actuators with the unsafe condition, this additional rulemaking action is required. As with the related ADs, we are issuing this AD to prevent electrical energy from lightning, hot shorts, or fault current from entering the fuel tank through the fuel valve actuator shaft, which could result in fuel tank explosions and consequent loss of the airplane.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA's response to each comment.

Requests to Revise the Proposed Applicability

Boeing, All Nippon Airways (ANA), American Airlines (AAL), Southwest Airlines (SWA), and United Airlines (UAL), requested that we delete Model 737-600, -700, 700C, -800, -900, and -900ER series airplanes from the applicability of the NPRM. The commenters stated that AD 2008-06-03, Amendment 39-15415 (73 FR 13081, March 12, 2008) ("AD 2008-06-03"), mandated replacement of all fuel system MOV actuators having Part Number (P/N) MA20A1001-1 (S343T003-39) on Model 737 airplanes, and that the compliance time for AD 2008-06-03 ended April 16, 2013. Boeing stated that first production delivery of the SFAR88 compliant actuator having P/N MA20A2027 (S343T003-56) occurred on line number 1877, and that the illustrated parts catalog (IPC) for that airplane and subsequent airplanes prohibited installation of MOV actuators having P/N MA20A1001-1 (S343T003-39).

We partially agree with the commenters' requests. We agree there is little risk that MOV actuators having P/N MA20A1001-1 (S343T003-39) are currently installed on Model 737-600, -700, 700C, -800, -900, and -900ER series airplanes for the reasons provided by the commenter. However, we want to ensure that MOV actuators having P/N MA20A1001-1 (S343T003-39) are not installed on these airplanes in the future. Therefore, we have removed Model 737 airplanes from the actions required by paragraph (g) of this AD but not from the applicability of the AD. We have retained Model 737 airplanes in paragraph (i) of this AD, which states that no person may install an MOV actuator having P/N MA20A1001-1 (S343T003-39) on any airplane. Paragraph (i) of this AD ensures that installation of MOV actuators having P/N MA20A1001-1 (S343T003-39) is prohibited.

Boeing, AAL, and UAL requested that we delete Model 757-200, -200PF, -200CB, and -300 series airplanes from the applicability of the NPRM. The commenters stated that the previously referenced AD 2008-06-03 is applicable to Model 757 airplanes. Boeing stated that the last Model 757 airplane was delivered prior to development of the new SFAR 88 compliant MOV actuator and that AD 2008-06-03 will ensure that MOV actuators having P/N MA20A1001-1 (S343T003-39) are not installed on any Model 757 airplanes.

We partially agree with the commenters' requests. We agree that the requirements of AD 2008-06-03 are intended to prevent Model 757-200, -200PF, -200CB, and -300 series airplanes from having an MOV actuator having P/N MA20A1001-1 installed and have determined there is little risk that MOV actuators having P/N MA20A1001-1 (S343T003-39) are currently installed on Model 757-200, -200PF, -200CB, and -300 series airplanes. However, we want to ensure that MOV actuators having P/N MA20A1001-1 (S343T003-39) are not installed on these airplanes in the future. Therefore, we have removed the Model 757 airplanes from the actions required by

paragraph (g) of this AD. We have retained Model 757 airplanes in paragraph (i) of this AD, which states that no person may install an MOV actuator having P/N MA20A1001-1 (S343T003-39) on any airplane.

Boeing, AAL, ANA, and UAL requested that we delete Model 767 airplanes from the applicability of the NPRM. The commenters stated that AD 2009-22-13, Amendment 39-16066 (74 FR 55755, October 29, 2009) (“AD 2009-22-13”), mandated replacement of all fuel system MOV actuators having P/N MA20A1001-1 (S343T003-39) on Model 767 airplanes, and that the compliance time for AD 2009-22-13 ended December 3, 2014. Boeing stated that first production delivery of the SFAR 88 compliant MOV actuator having P/N MA30A1001-1 (S343T003-56) occurred on line number 941; and that the IPC for that airplane and subsequent airplanes prohibited installation of the MOV actuator having P/N MA20A1001-1 (S343T003-39).

We partially agree with the commenters’ requests. We agree with deleting most Boeing Model 767-200, -300, -300F, and -400ER series airplanes from the actions required by paragraph (g) of this AD but not from the applicability of the AD. The requirements of AD 2009-22-13 are intended to prevent all but Model 767-300 series airplanes having line numbers 939 and 940 from having an MOV actuator having P/N MA20A1001-1 (S343T003-39) installed. We have determined that except for Model 767-300 series airplanes having line numbers 939 and 940, there is little risk that MOV actuators having P/N MA20A1001-1 (S343T003-39) are currently installed on Model 767-200, -300, -300F, and -400ER series airplanes. Therefore, we have revised paragraph (g) of this AD to specify that the actions apply to Model 767-300 series airplanes with line numbers 939 and 940. To ensure that MOV actuators having P/N MA20A1001-1 (S343T003-39) are not installed in the future on Model 767 airplanes, we have retained Model 767 airplanes in paragraph (i) of this AD, which states that no person may install an MOV actuator having P/N MA20A1001-1 (S343T003-39) on any airplane.

Boeing, AAL, ANA, Delta Airlines (DAL), and UAL requested that we revise the Model 777 applicability. The commenters stated that AD 2013-05-03, Amendment 39-17375 (78 FR 17290, March 21, 2013) (“AD 2013-05-03”), mandated replacement of all fuel system MOV actuators having P/N MA20A1001-1 on Model 777 airplanes and prohibits installation of an MOV actuator having P/N MA20A1001-1 on any Model 777 airplane. Boeing stated that the NPRM would be redundant for airplanes covered by AD 2013-05-03, and that all other airplanes that are not covered by AD 2013-05-03 have no production authority to install an MOV actuator having P/N MA20A1001-1.

We partially agree with the commenters’ requests. We agree with deleting Model 777 airplanes with Aircraft Information Management System (AIMS) version 2 covered by AD 2013-05-03 from the actions required by paragraph (g) of this AD but not from the applicability of this AD. The requirements of AD 2013-05-03 will prevent an MOV actuator having P/N MA20A1001-1 from being installed on these airplanes. We disagree with deleting Model 777 airplanes with AIMS version 1 from the applicability of this AD because AD 2013-05-03 allows airplanes with AIMS version 1 to retain MOV actuators having P/N MA20A1001-1 at certain locations. We have revised paragraph (g) of this AD to exclude Model 777 airplanes having line numbers 454 through 551 inclusive, which have AIMS version 2 installed.

Boeing, AAL, and DAL requested that we exclude certain Model 777 airplanes from the actions required by paragraph (g) of the proposed AD. The commenters stated that it appears that the intent of the NPRM might be to address the IPC that allows an MOV actuator having P/N MA20A1001-1 (S343T003-39) to be installed on a limited number of Model 777 airplanes. Boeing stated that it believes that, as the IPC has been corrected to not allow installation of an MOV actuator having P/N MA20A1001-1 (S343T003-39), and that Boeing Service Bulletin 777-28A0034, Revision 3, dated September 25, 2015, provides inspections of the MOV actuator for the 11 airplanes

affected by the IPC, the actions taken are sufficient to ensure removal of the MOV actuator having P/N MA20A1001-1 (S343T003-39) from the affected airplanes.

We partially agree with the commenter's request. We have revised paragraph (g) of this AD to exclude Model 777 airplane having line number 563 and subsequent from the actions required by paragraph (g) of this AD. As stated previously, we have already revised paragraph (g) to exclude Model 777 airplanes having line numbers 454 through 551 inclusive. However, the 11 Model 777 airplanes affected by the IPC error are retained in paragraph (g) of this AD in order to require an inspection and replacement of MOV actuators having P/N MA20A1001-1 (S343T003-39). To ensure that MOV actuators having P/N MA20A1001-1 (S343T003-39) are not installed on Model 777 airplanes in the future, all Model 777 airplanes are included in paragraph (i) of this AD, which states that no person may install an MOV actuator having P/N MA20A1001-1 (S343T003-39) on any airplane. Paragraph (i) of this AD ensures that installation of MOV actuators having P/N MA20A1001-1 (S343T003-39) is prohibited.

Requests to Clarify Justification for the NPRM (79 FR 66343, November 7, 2014)

Boeing, AAL, and DAL requested that we clarify the reasons for issuing the NPRM as it appears to be requiring actions mandated in previously issued ADs.

We agree to clarify the reasons for this rulemaking action. We have revised the SUMMARY and Discussion section of this final rule to state that previous ADs address this SFAR 88 issue for the majority of the airplanes delivered with these actuators. Since those ADs did not cover all of the airplanes, and since some airplanes have no restrictions to prevent airplanes delivered with improved actuators from receiving replacement actuators with the unsafe condition, this additional rulemaking action is required. As with the ADs described previously, we are issuing this AD to prevent electrical energy from lightning, hot shorts, or fault current from entering the fuel tank through the actuator shaft, which could result in fuel tank explosions and consequent loss of the airplane.

Request to Revise Unsafe Condition Statement

Boeing requested that we revise the unsafe condition statement in the NPRM to better define the unsafe condition. Boeing stated that the unsafe condition is the possibility for operators to install the non-SFAR88 compliant [and in this case unsafe] MOV actuator design, due to a possible IPC error, on in-service airplanes that have been delivered with the SFAR88 compliant MOV actuator design. Boeing stated that AD 2008-06-03 required replacing all MOV actuators having P/N MA20A1001-1 (S343T003-39) for all Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, and Model 757 airplanes, but the actions in the NPRM implied otherwise.

We partially agree with the commenter. We agree that an IPC error might have allowed non-SFAR88 compliant MOV actuators to be installed. However, the IPC error only affected a limited number of Model 777 airplanes and not Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, and Model 757 and 767 airplanes. As stated previously, this AD was revised and, therefore, does not require an inspection, and replacement if necessary, for Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, Model 757 airplanes, and Model 767 airplanes, except for Model 767-300 series airplanes having line numbers 939 and 940.

We disagree with changing the unsafe condition statement since that statement reflects the consequent results of installing the non-compliant MOV actuator. We have not changed this AD in this regard.

Requests to Revise Compliance Time for the MOV Actuator Replacement

Boeing and UAL requested that we revise the compliance time in paragraph (h) of the proposed AD for the MOV actuator replacement from within 60 months after the effective date of this AD to before further flight. The commenters stated that this revision would then match the language used in AD 2008-06-03.

As we stated previously, the airplanes identified in AD 2008-06-03 have been removed from paragraph (g) of this AD and therefore those airplanes are not affected by paragraph (h) of this AD. The compliance of “within 60 months after the effective date of this AD” does correspond with the compliance times specified in AD 2009-22-13 and AD 2013-05-03 and the associated Boeing service information. In developing an appropriate compliance time, we considered the safety implications, parts availability, and normal maintenance schedules for timely accomplishment of replacement of the MOV actuators. In consideration of all of these factors, we determined that the compliance time, as proposed, represents an appropriate interval in which the MOV actuator having P/N MA20A1001-1 (S343T003-39) can be replaced in a timely manner within the fleet, while still maintaining an adequate level of safety. We have confirmed with Boeing that the safety analysis supports the compliance of “within 60 months after the effective date of this AD.” Operators are always permitted to accomplish the requirements of an AD at a time earlier than the specified compliance time. We have not changed this AD in this regard.

Request to Remove Parts Installation Prohibition

Boeing and UAL stated that AD 2008-06-03, AD 2009-22-13, and AD 2013-05-03 already prohibit installation of the unsafe MOV actuator.

From this statement, we infer that the commenters would like us to remove paragraph (i) of the proposed AD, which proposed to prohibit installation of an MOV actuator having P/N MA20A1001-1 (S343T003-39) on any airplane as of the effective date of the AD. We do not agree to remove paragraph (i) of this AD. While in some instances there are prohibitions against installation of these MOV actuators, there are certain airplanes on which operators are still allowed to install these actuators. We have determined that paragraph (i) of this AD is necessary to ensure that no MOV actuators having P/N MA20A1001-1 (S343T003-39) are installed on any Model 737-600, -700,

-700C, -800, -900, and -900ER series airplane, Model 757 airplane, Model 767 airplane, or Model 777 airplane. We have not changed this AD in this regard.

Requests to Revise “Affected AD” Paragraph

Boeing and ANA requested that we add AD 2008-06-03 to paragraph (b), “Affected ADs” of the proposed AD. ANA also requested that we add AD 2009-22-13 and AD 2013-05-03 to paragraph (b), “Affected ADs” of the proposed AD. Boeing stated that AD 2008-06-03 replaced all MOV actuators having P/N MA20A1001-1 (S343T003-39), and that the NPRM implied otherwise.

We agree that the referenced ADs are related, but we disagree with the request to change paragraph (b) of this AD. The referenced ADs are similar to this AD but are not directly impacted by this AD. The term “affected ADs” refers to ADs that are directly affected by this AD, for example, ADs that are superseded, revised, or terminated by this AD. Also, as stated previously, airplanes affected by AD 2008-06-03 have been removed from the inspection required by paragraph (g) of this AD, and therefore, are not included in the replacement of MOV actuators having P/N MA20A1001-1 (S343T003-39) required by paragraph (h) of this AD. We have not changed this AD in this regard.

Requests to Use Alternative Inspections

Boeing and DAL requested that we make accomplishment of the inspection requirements in paragraphs (g) and (h) of this AD using the service information identified in earlier ADs, such as AD 2008-06-03, acceptable for addressing the unsafe condition identified in this AD. Boeing stated that approving those previous inspection requirements would prevent repetition of inspections already performed.

As we stated previously, the airplanes identified in AD 2008-06-03 and certain earlier ADs have been removed from paragraph (g) of this AD; therefore, those airplanes are also not affected by paragraph (h) of this AD. Thus, there is no need to identify the service information from earlier ADs. We have not changed this AD in this regard.

Request to Retain Maintenance Records Review

ANA requested that we retain the maintenance records review provided in paragraph (g) of the proposed AD to determine if an unsafe MOV actuator is installed.

We acknowledge the commenter's request. Paragraph (g) of this AD already permits a review of the airplane maintenance records to determine if the unsafe MOV actuator is installed. We have retained that action in this AD. Therefore, no additional change to this AD is necessary in this regard.

Requests for Alternative Method of Compliance (AMOC)

ANA and DAL requested that we specify the previous related ADs as an AMOC for the actions, since those ADs do the same actions for some of the airplanes identified in the NPRM.

We partially agree with the commenters' requests. We agree with the concept of providing credit for previous actions because most operators have already taken the actions required by the previously described related ADs. We disagree with providing an AMOC for previous actions because airplanes changed according to the requirements of the previously described related ADs have been removed from paragraph (g) of this AD. No further change to this AD has been made in this regard.

Request for Part Clarification

SWA requested that we clarify the name of the actuator. SWA stated that the NPRM preamble describes replacement of "spar-mounted" MOV actuators, but paragraphs (g), (h), and (i) of the proposed AD does not state "spar-mounted."

We agree to clarify the name of the actuator. Most components have several ways to refer to them. In order to provide consistency, we have removed the term "spar-mounted" in the preamble of this final rule.

Request to Provide MOV Actuator Locations

DAL requested that we include or give reference to graphics or figures, which would clearly illustrate the locations of all affected MOV actuators.

We agree with the commenter's request to specify the locations of all affected MOV actuators, but we do not agree to reference graphics or figures. We have added new paragraphs (g)(1) and (g)(2) in this AD to specify the MOV actuator locations.

Request to Revise Part Location Wording

DAL requested that we revise the last sentence of paragraph (g) of the proposed AD to reflect the fact that there are multiple positions for the installed MOV actuators.

We agree with the commenter's request. We have revised the introductory text of paragraph (g) of this AD to state in part, "A review of airplane maintenance records is acceptable in lieu of this inspection, if the part number of the actuator at each location can be conclusively determined from that review."

Request to Add IPC Terminating Action

DAL requested that we revise the NPRM to permit an IPC restriction as terminating action for the actions required by paragraph (g) of the propose AD. DAL stated that it believes this IPC restriction would provide an equivalent level of safety to the maintenance records review specified in paragraph (g) of the proposed AD.

We do not agree with the commenter's request. The IPC would indicate that P/N MA20A1001-1 (S343T003-39) is not eligible for installation, but it would not require actions for any airplanes with a non-compliant actuator that is currently installed. In addition, the IPC is not FAA-approved and is not used to control the configuration of the airplane. Therefore, the inspection required by paragraph (g) of this AD must be done to identify non-compliant actuators and paragraph (h) of this AD must be done to replace non-compliant actuators. We have not changed this AD in this regard.

Request to Provide Part Replacement Procedure Reference

DAL requested that we include a statement in paragraph (h) of the proposed AD to specify that MOV actuator replacement following the applicable aircraft maintenance manual (AMM) procedures is an acceptable procedure. DAL stated that operators will have difficulty complying with the part replacement requirements due to the lack of specific details relating to the part replacement method.

We agree with the commenter's request. We have added new Note 1 to paragraph (h) of this AD, which states that guidance on replacing the affected MOV actuator can be found in the Boeing 767 Aircraft Maintenance Manual or the Boeing 777 Aircraft Maintenance Manual, as applicable.

Request to Provide Part Number References

DAL requested that we include a statement in paragraph (h) of the proposed AD, or an additional new paragraph, which would identify all known MOV actuator part numbers that are acceptable replacement parts. DAL stated that operators will have difficulty complying with the part replacement requirements due to the lack of specific details relating to the MOV actuator part numbers.

We do not agree with the commenter's request. The unsafe condition is present in only one part number actuator. There are several part numbers that are appropriate for replacement and new ones may become available. As such, we only intend to prohibit the installation of parts that are known to have unsafe conditions associated with them. This approach should make it easier for an operator to comply with the requirements of this AD without the need for AMOCs to install future acceptable part numbers and still prevent unsafe parts from being installed. We have not changed this AD in this regard.

Request to Revise Proposed Cost Estimates

DAL requested that we revise the proposed costs estimates. DAL stated that inspection of all the MOV positions (described in Boeing Service Bulletin

777-28A0034), can take between 3.25 and 3.75 work-hours, excluding access and restoration; and that the on-condition replacement of a single MOV actuator can be as high as 51 work-hours. DAL also stated that the cost of a replacement MOV actuator is \$6,862.

We agree with the commenter's request to revise the cost estimates provided in this final rule. We have revised the on-condition part cost to \$6,862. Replacing an actuator can take as little as 30 minutes, or up to 51 hours if a fuel tank needs to be emptied. Therefore, we have revised the on-condition labor cost to up to 51 work-hours to reflect the possible higher cost.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Costs of Compliance

We estimate that this AD affects 2,140 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators

Inspection to determine part number (Up to 482 airplanes)	1 work-hour X \$85 per hour = \$85	\$0	\$85	Up to \$40,970
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We estimate the following costs to do any necessary replacements that would be required based on the results of the inspection. We have no way of determining the number of aircraft that might need these replacements:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Actuator replacement	Up to 51 work-hours X \$85 per hour = up to \$4,335 per actuator	\$6,862 per actuator	Up to \$11,197 per actuator

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the

national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2016-04-20 **The Boeing Company**: Amendment 39-18414; Docket No. FAA-2014-0755; Directorate Identifier 2014-NM-080-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all The Boeing Company airplanes identified in paragraphs (c)(1) through (c)(4) of this AD, certificated in any category.

(1) Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes.

(2) Model 757-200, -200PF, -200CB, and -300 series airplanes.

(3) Model 767-200, -300, -300F, and -400ER series airplanes.

(4) Model 777-200, -200LR, -300, -300ER, and -777F series airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 28, Fuel.

(e) Unsafe Condition

This AD results from fuel system reviews conducted by the manufacturer. We are issuing this AD to prevent electrical energy from lightning, hot shorts, or fault current from entering the fuel tank through the fuel valve actuator shaft, which could result in fuel tank explosions and consequent loss of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspection to Determine Part Number (P/N)

For Model 767-300 series airplanes having line numbers 939 and 940; and Model 777-200, -200LR, -300, -300ER, and -777F series airplanes, except airplanes having line numbers 454 through 551 inclusive, and 563 and subsequent: Within 60 months after the effective date of this AD, do an inspection to determine whether any motor-operated shutoff valve (MOV) actuators having P/N MA20A1001-1 (S343T003-39) for the fuel tanks or fuel feed system are installed on the airplane. A review of airplane maintenance

records is acceptable in lieu of this inspection if the part number of the actuator at each location can be conclusively determined from that review.

(1) For Model 767 airplanes, there are several affected actuator locations: the fuel shutoff valves, the fuel crossfeed valves, the defueling valves, the jettison nozzle valves, the jettison transfer valves, the auxiliary power unit (APU) fuel shutoff valve and the APU fuel isolation valve.

(2) For Model 777 airplanes, there are several affected actuator locations: the fuel shutoff valves, the fuel crossfeed valves, the defueling valves, the jettison nozzle valves, the jettison isolation valves, the APU fuel shutoff valve, the APU fuel isolation valve, the auxiliary tank isolation valve, the auxiliary tank refuel valve, the auxiliary tank fuel transfer valve, the auxiliary tank vent valve, and the auxiliary tank Number 2 refuel isolation valve.

(h) Replacement

If, during the inspection required by paragraph (g) of this AD, any MOV actuator having P/N MA20A1001-1 (S343T003-39) for the fuel tanks is installed: Within 60 months after the effective date of this AD, replace the affected MOV actuator with a serviceable, FAA-approved MOV actuator other than one having P/N MA20A1001-1 (S343T003-39).

Note 1 to paragraph (h) of this AD: Guidance on replacing the affected MOV actuator may be found in the Boeing 767 Aircraft Maintenance Manual or the Boeing 777 Aircraft Maintenance Manual, as applicable.

(i) Parts Installation Prohibition

As of the effective date of this AD, no person may install an MOV actuator having P/N MA20A1001-1 (S343T003-39) on any airplane.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Related Information

(1) For more information about this AD, contact Rebel Nichols, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle ACO, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6509; fax: 425-917-6590; email: rebel.nichols@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425 227-1221.

(l) Material Incorporated by Reference

None.

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Michael Kaszycki,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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